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feasible. Timber of many kinds is available—and with this we may contrast the condition of certain Eskimo who must rely on driftwood for some of their manufactures and on oil for their heat. Furthermore, animal foods are found by land and by sea in sufficient quantities to support a relatively large population of a non-agricultural, hunting class.

Clearly then some of the very primitive features we shall describe were not forced on the natives by their environment, but rather were the result of lack of ingenuity or of inertia.

CULTURE STATUS

Fuegian culture ranks among the most primitive that has been known within the limits of recorded history. To emphasize this statement we subjoin a list of all the articles and materials observed among the Ona and the Yahgan. This list at first glance seems fairly long, but one must consider that it embraces not only the individual but a complete family including both sexes and all ages. Further, it includes not what appeared for any given occasion but everything with which any Indian normally came in contact during an entire lifetime. In contrast, if the reader will list the objects he makes use of between bed and breakfast, he will find that in half an hour of daily routine he has utilized more articles and more materials than a Fuegian ever manipulated.

More justly, however, we should compare the Fuegian culture with the status usually found among Indian hunting tribes. On this basis we find that the Fuegians lacked such simple implements as the drill, the ax, the spear-thrower, fish-hooks, and cooking containers. They had no pottery, no weaving, no method of softening skins except by use, nor had they more than a rudimentary art of painting, while sculpture was beyond them. They rarely stored food against a time of stress. Their games, their social organization and ceremonies, were but slightly developed. Religion was largely a negative affair, for they indulged less in religious acts probably than any people known in the world in recent times. Animistic beliefs they had, but scarcely a trace of fetishism has been noted, and of totemism—so widely developed throughout the Americas—there is not a vestige.

In estimating this list it must also be borne in mind that the Ona and Yahgan cultures have intermingled especially along the frontier. In some instances, such as the initiation ceremonies or

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105 177 the method of fire-making, the borrowing group made the introduced feature completely their own. But often the borrowed trait never became characteristic, and its use was only local and occasional. If these acquired features are subtracted the cultural poverty of each tribe is greatly intensified.

105 171 SUMMARY OF FUEGIAN MATERIAL CULTURE

Ona	Yahgan
Clothing	
robe	cape
slip	——
pubic covering	pubic covering
moccasins	moccasins (rare)
leggings (rare)	leggings (rare)
hunter's cap	——
shaman's cap (rare)	shaman's cap (rare)
——	mittens (rare)
Ornamentation	
anklets	anklets (rare)
wristlets (rare)	wristlets (rare)
necklace	necklace
paint	paint
tattooing	——
House	
skin windbreak	skin-covered dome of saplings
log tipi (rare)	log tipi (rare)
Transportation	
pack harness	canoe
walking-stick	paddle
——	bailer
——	mooring rope
Camp Equipment	
flint and pyrites	flint and pyrites
fire-tongs	fire-tongs
grease stone	grease stone
skin water-bag	bark bucket
——	shell cup
skin storage-bags	skin storage-bags
gut storage-bags (rare)	gut storage-bags
——	kelp storage-bag

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basket (one kind)	baskets (three kinds)
frame cradle	——
dog leash	——
——	feather broom (recent?)
comb	comb
——	face-painting stick

Tools

knife	knife
flesh-scraper	flesh-scraper (rare)
wood-scraper	wood-scraper
sharpening stone	sharpening stone
awl	awl
chipping tool	?
stone shaft-polisher	?
skin polisher	pumice
——	barking tools (two kinds)

Weapons and Hunting Equipment

bow and arrow	bow and arrow (rare)
spear (rudimentary)	spears (five kinds)
sling (rare)	sling
——	club
bird-snare	bird-snare
net (rare, two kinds)	net (rare)
——	grass dip-net
——	fish-line
bark torch	bark torch

Games

ball	ball
circular grass target (rare)	——

Religious and Ceremonial Paraphernalia

masks	masks
feather headband	feather headband
kelp-goose down headband	kelp-goose down headband
——	painted sticks
——	painted thong
——	guanaco-hide headband
——	tickling stick
——	ceremonial spear

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Materials

wood	wood
sinew	sinew
skin	skin
stone	stone
bone	bone
whalebone (rare)	whalebone
——	k[illegible]
grass	grass
feathers	feathers
——	pumice
white clay	white clay
red burnt earth	red burnt earth
charcoal	charcoal
pitch (post-European)	——
iron (post-European)	iron (post-European)
glass (post-European)	glass (post-European)

PHYSICAL TYPE

The writer engaged in no anthropometric investigation in Tierra del Fuego, but certain measurements are available by which the physical types there to be found may be determined. The most important study yet published is that of Hyades (1891) on the Yahgan prepared in coöperation with Deniker, a work surprisingly sound in method considering how long ago it appeared. A series of measurements on the Ona taken many years ago but printed recently (1927) by Dr. Lehmann-Nitsche is also of prime importance. Somatological data collected by Gusinde and Koppers in recent years is beginning to appear in print, but with a single exception it has not been possible to obtain copies in time to incorporate the material here. Other studies of smaller scope are available and have been listed by Cooper (1917, pp. 138–140) and Dixon (1923, pp. 454–455). Even when concentrated into a single group, Fuegian somatological material is not abundant.

Primary division of the Indians of Tierra del Fuego into groups, Foot Indians and Canoe Indians, is made on cultural grounds. This classification might also be based on physical type, and, in case of the Foot Indians, on linguistic relationship. As with the cultural evidence, physical data on the Alacaluf and Haush are so scanty that we shall confine our discussion to the Ona and the Yahgan.

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FUEGIAN CULTURE STATUS

171 105 We have considered the Foot and Canoe Indians of Tierra del Fuego as they have revealed themselves to modern investigation and as they have been reflected in archeological remains. Before closing this account it will be well to fix their position in relation to cultural development and adaptation to environment in other parts of the world. We shall therefore examine the attainments of the Paleolithic and Neolithic inhabitants of Europe, of the Seri Indians of Mexico, and of the Eskimo—all in the light of Fuegian culture.

A.—Fuegians Compared with Primitive Europeans

Assayed by the standards of Old World archeology, the Fuegian tribes stand definitely in the early Neolithic stage of culture, for they understood the use of the bow, made coiled basketry, used canoes (which may or may not have existed in Paleolithic Europe), and they had domesticated dogs. As for stoneworking, however, aside from some of their arrow- and spear-points (which are not only well made but barbed), Fuegian implements are fully equaled by finds dating from the Acheulean and Mousterian floors in Europe; that is to say, the latter half of the lower Paleolithic period.[1] In fact, in the stone drill, invented during the Mousterian age and perfected in the Aurignacian, Europeans possessed a tool unknown to the Fuegians, who could puncture nothing harder than hide or bark with their bone awls. By the time of the Aurignacian period Europe also had developed the bone needle with a pierced eye to which the Fuegians did not attain.

Magdalenian Europe offers strong likeness to the Canoe Indians of Tierra del Fuego, owing to the very similar types of barbed bone harpoons used in both regions. Yet by this time in Europe the chipping of stone had risen to the level of an art, the spear-thrower was widely used (an implement which one suspects that the Fuegian tribes may have forgotten), clothes were carefully

[1] It is unfortunate that the names attached to the great primary periods of human life should denote technological methods of manufacturing stone implements, for current practice distinguishes these epochs and their subdivisions by the fauna and by the kinds of utensils in use rather than by the manner in which they were made. This change in classification became necessary when it was recognized that the Paleolithic technique persisted into the Neolithic and even the Metal ages. We must emphasize that these terms are without chronological significance in the New World.

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SH6 Yahgan SH6

tailored (as attested by the finding of bone buttons), elaborate three-strand necklaces were manufactured, and, above all, sculpture was common and painting had reached both relatively and absolutely a very developed plane. The depiction of masked human figures suggests parallel religious phantasmagoria in both regions. In contrast the Fuegians were totally devoid of sculpture, and their painting was limited to the crudest daubs. Their necklaces were most primitive. Their garments were merely wrapped around the body and held in place by hand, or, if they did not completely envelop the body, were tied on by thongs crossing the bare flesh.

As to polished stone implements, Tierra del Fuego has produced few. In fig. 41 we show a bola from the east coast. Outes (1905, p. 427) has fully demonstrated that the true home of this weapon is in the northeastern Pampas and that it was unknown in Patagonia until the eighteenth century. Clearly it is no ancestral arm carried to Tierra del Fuego by Foot Indians in remote centuries, but rather a recent introduction, not long antedating the white colonization. Also we have seen a stone spike excavated in Yahgan territory. Apparently it has been shaped in part by pecking; at best it is an isolated instance of the Neolithic technique.

The rarity of polished stone implements in Fuegia is to be explained not by the lack of aptitude but by the indolence of the natives. To so-called civilized man the chipping of stone seems a mysterious craft, while it is patent that anyone who takes the time can grind a stone to the desired sh[illegible] As a matter of fact, the chipping of serviceable tools can be learned with a few days' practice, though of course the more delicate flaking, as with all handicraft, can come only as the result of long experience. And furthermore, chipped implements can be turned out quickly,—it takes only ten or fifteen minutes for a skilful Ona to finish a most delicate arrow-point,—while ground stone implements require patience, mental discipline, and foresight.

This point is one to recall in estimates of all or any phases of Fuegian culture, for it will be found that deficiencies arose not from any innate mental or physical handicap, but from laziness and lethargy. This generalization applies not so much to the necessaries as to the conveniences of life. Thus the Ona bow and the Yahgan spear are admirable weapons, but the houses of both tribes were woefully inadequate. Yet there is no reason why the Yahgan and Ona should not, with forethought and initiative,

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Seri NU31

have made themselves as comfortable as other tribes occupying an equivalent environment. That they did not, to the writer, indicates a lack of something vital in their mental makeup.

The brief comparison we have made between primitive European and Fuegian cultures shows that although the Fuegians had partly attained the technological plane called Neolithic in the Old World, nevertheless in most respects they were scarcely better off than the semi-simian Neanderthal man of Europe. Clearly then they were laggards or backsliders in the development of mankind, so that in depicting their manner of life we are justified in assuming that we are recreating a vista of life in Europe or elsewhere many thousands of years ago.

However, the tribes of Tierra del Fuego are not a unique phenomenon, as we shall show by comparison with an equally though differently untutored New World group.

B.—Fuegians Compared with the Seri

The Seri, who inhabit a barren territory on the eastern shore of the Gulf of California and the adjacent islands, of which the largest is Tiburon, are one of the most primitive Indian tribes on the North American continent. Their climate is hot and dry. Their food supply is abundant—both marine and terrestrial. Like Fuegia the region occupied by the Seri is isolated from the main stream of cultural development, so that the native society probably represents a form of life much more wide-spread long ago.

Like the Fuegians, the Seri had no agriculture and no domestic animals except the dog, which indeed seems to have been half-wild. Their most important food was the turtle, which they caught with a harpoon having a detachable head tied to a cord. This may be compared to the Yahgan seal-spear. Long ago they used a two-headed barbed spear with the barbs facing inward to catch fish. The Yahgan also employed a two-headed fish-spear, but did not set the barbs inward. For boats the Seri made reed balsas with high pointed ends, a seaworthy craft but one which can be used only in warm climates because in rough weather the crew are drenched with spray or wet by water coming through the floor. These balsas the Seri propelled with clam-shells or boards held in the hands. In addition to spearing fish off-shore the Seri also caught them with their hands in shallow pools at low tide like the Ona, and they obtained on the beach large quantities of shellfish—chiefly clams and oysters.

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Seri NW31

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On shore the Seri gathered various wild vegetal foods. They clubbed roosting pelicans at night. They caught also many deer and rabbits. We use the word caught advisedly, for usually the Seri, fleet of foot and hardy, ran these animals down and literally caught them in their hands. Meat was eaten raw except when there was an oversupply. Then it was partly cooked to tempt their jaded appetites. At times in hunting and regularly in war they employed a bow and arrows of simple type. The arrow had a wooden tip, rarely a chipped stone point.

For tools the Seri used a bone or a wooden awl, a wooden marline spike, a stone hammer and anvil, and a clam-shell. The latter served as a knife, but its shape was not modified, nor was it set in a handle. Manual dexterity was at a minimum among these people, and their implements and weapons were even more primitive than those of the Fuegians.

The fundamental Seri garment was a pelican-skin robe, which, like the Yahgan cape, was shifted from side to side with the wind in inclement weather. Also they wore at times a kilt and sleeved shirt of woven material, and thus they placed themselves on a higher cultural plane than the Fuegians, for they not only had acquired the art of weaving, but of tailoring their garments, neither of which were known to the Indians of Tierra del Fuego. In addition, the Seri wore a belt, often of snake-skin, and sometimes sandals of turtle-flippers. They adorned their persons with necklaces of seeds, of wooden beads, of shell, and of hair. They painted designs on the faces much more elaborate in character than those of the Ona and Yahgan.

Seri houses, scarcely better than the Ona windbreak, were arches of saplings partly shingled with sponges and turtle-shells. Inadequate even in a warm climate, yet they offered more protection comparatively than the Fuegian houses. As the Seri were constantly moving from place to place, these rude shelters were frequently abandoned to be reoccupied on some other occasion.

Of household furniture the chief article was a globular pottery water-jar, because water was scarce in Seriland and had to be transported long distances. A yucca ring-base was provided for the water-jar, and at times two jars were transported in nets slung on a shoulder yoke. In addition the Seri sometimes made a cooking-pot, an open dish, miniature vessels, and crude figurines; they also used a shell cup, and made simple coiled baskets. Their

3: Lothrop E-5 (1924-1925) 1928
SH6 Yahgan SH6
Seri V031

babies they carried on wooden frames like the Ona. Fire they made with a drill.

From the above remarks it appears that other inhabitants of the New World lived on a technological plane different in detail but no higher than the natives of Tierra del Fuego. Indeed in many respects—notably the lack of a knife and a scraper—the Seri are the more primitive. Yet their need was not so great, because the climate they enjoyed did not make such demands on their vitality.

When we examine social institutions we find the Seri on a markedly higher plane than the Fuegians. The tribe as a whole had marked national consciousness. It was divided into exogamic totemic clans based on maternal descent. Authority was lodged in the matrons, delegated to the elder brother for such masculine occupations as war and hunting. Religious concepts and practices also were on a higher plane than in Tierra del Fuego.

On the whole then we may say that the Seri, like the Fuegians, were a marginal group representing an early cultural stream; that both peoples were markedly deficient in houses, tools, and accouterments; but that the Seri, being closer to the fringe of higher culture, had borrowed in rudimentary form such higher arts as pottery-making and weaving, and had become endowed with more advanced religious and social practices. In both cases it seems that, although migratory by nature, their peregrinations had been circumscribed within fixed limits with resultant cultural atrophy, so that centuries had passed with little modification in their form of life.

The status of very primitive groups like the Fuegians and the Seri has bearing on the unknown pioneers who settled the New World, for the simplest and crudest tribes of the present may reflect the condition of their primitive migratory ancestors. We shall examine then the evidence afforded by such backward groups to throw light on the time when the Americas were settled and on the nature of the culture that was first introduced.

Boas,[1] Wissler,[2] Kroeber,[3] and others have brought forward evidence that man reached the New World in a state of cultural development corresponding to the beginning of the Neolithic period in Europe. This hypothesis rests on fairly well assured

[1] The History of the American Race; *Annals N. Y. Acad. of Science*, XXI, 1912.
[2] The American Indian, New York, 1917.
[3] American Culture and the Northwest Coast; *Amer. Antiq.*, N.S., XXV, no. 1. Also Anthropology, New York, 1923.